

What is claimed is:

1. A system for repairing a defect in an annulus of a spinal disc, comprising:
at least one blocking member positionable at least adjacent to the defect in the annulus;
at least one anchor engageable with said at least one blocking member to secure said blocking member to tissue adjacent the defect; and
a guide instrument including distal portion positionable in the defect, said guide instrument including a guide member adapted to guide an instrument for forming a hole in the tissue to receive the at least one anchor, said guide member being further adapted to guide a cutting instrument for forming a recess in the tissue extending between the hole and the defect.
2. The system of claim 1, wherein said blocking member includes an attachment portion extending from one end thereof, said attachment portion being adapted to receive said at least one anchor therethrough.
3. The system of claim 2, wherein said attachment portion includes an eyelet defining a passage therethrough for receiving said at least one anchor.
4. The system of claim 2, wherein said blocking member includes an attachment portion at the other end thereof, and further comprising a second anchor receivable through said second attachment portion.
5. The system of claim 2, wherein said attachment portion includes an elongated passage extending transversely to said blocking member.

6. The system of claim 5, wherein said at least one anchor comprises a body sized and shaped for form-fitting receipt in said elongated passage.

7. The system of claim 6, wherein said body of said at least one anchor includes a proximal portion and a distal engagement portion, said distal engagement portion including a number of ridges and valleys extending thereacross.

8. The system of claim 5, wherein said body of said at least one anchor includes a generally rectangular cross-section and planar upper and lower surfaces.

9. The system of claim 1, wherein said blocking member includes a width along the annulus when positioned in the defect that is less than a width of the defect along the annulus.

10. The system of claim 1, wherein said at least one anchor includes means for resisting pullout from the tissue.

11. The system of claim 1, wherein said blocking member is made from a resorbable material selected from the group consisting of: autograft, allograft, xenograft, hard tissue, connective tissue, demineralized bone matrix, polylactide, polyglycolide, tyrosine-derived polycarbonate, polyanhydride, polyorthoester, polyphosphazene, calcium phosphate, hydroxyapatite, bioactive glass, collagen, albumin, fibrinogen and combinations thereof.

12. The system of claim 1, wherein said blocking member is made from a non-resorbable material selected from the group consisting of: polyethylene, polyester, polyvinyl alcohol, polyacrylonitrile, polyamide, polytetrafluorethylene, poly-paraphenylene terephthalamide, cellulose, and combinations thereof.

13. The system of claim 1, wherein said blocking member and said at least one anchor each comprise resorbable material.

14. The system of claim 1, wherein said blocking member and said at least one anchor each comprise non-resorbable material.

15. The system of claim 1, wherein the defect has a width along the annulus and said blocking member extends across at least about 10% of the width of the defect when positioned therein.

16. The system of claim 1, wherein the defect has a width along the annulus and said blocking member extends across about 10% to about 50% of the width of the defect when positioned therein.

17. The system of claim 1, wherein the defect has a width along the annulus and said blocking member extends across at least about 50% of the width of the defect when positioned therein.

18. The system of claim 1, wherein said blocking member includes a body portion including one or more components selected from the group consisting of: woven tubing,

sutures, tethers, cords, planar members, bands, wires, cables, mesh sheets, braids, plugs, and scaffolds.

19. The system of claim 1, wherein said guide member of said guide instrument is elongated and includes a passage extending therethrough for receiving the instrument for forming the hole and a slot extending through said body in communication with said passage for receiving the instrument for forming the recess.

20. The system of claim 19, wherein said guide instrument member further comprises a positioning flange extending distally from said guide member and offset from said passage.

21. The system of claim 20, wherein said positioning flange comprises a portion of a positioning member, said positioning member including a body mounted to said guide member, said positioning flange extending distally from said body.

22. The system of claim 20, wherein said body includes a slot therethrough aligned with and in communication with said slot of said guide member.

23. The system of claim 19, further comprising a shaft extending proximally from said guide member and a handle assembly extending from said shaft.

24. The system of claim 23, wherein said handle assembly includes a handle member oriented transversely to a longitudinal axis of said guide instrument.

25. The system of claim 24, wherein said handle member is securable at a plurality of locations along said shaft to adjust a length of said guide instrument extending distally from said handle member.

26. The system of claim 23, wherein said slot and said passage extend through said shaft.

27. The system of claim 19, wherein said instrument for forming the hole comprises a drill instrument positionable through said passage and operable therethrough to form the hole.

28. The system of claim 19, wherein said cutting instrument includes an elongated shaft positionable in said passage, said cutting instrument further comprising a blade extending from said shaft through said slot and movable along said slot with movement of said shaft along said passage.

29. The system of claim 28, wherein said blade includes a sharpened distal end spaced distally from a distal end of said elongated shaft.

30. A method for repairing an annulus defect of a spinal disc, comprising:
forming a recess in a vertebra on at least one side of the spinal disc in communication with the defect;
positioning a blocking member in the defect and into the recess; and
engaging the blocking member to the vertebra.

31. The method of claim 30, further comprising:
forming a hole in the vertebra in communication with the defect through the recess;
and
engaging the blocking member to the vertebra with an anchor extending through the blocking member and into the hole.

32. The method of claim 31, wherein forming the hole includes forming a circular hole.

33. The method of claim 31, wherein forming the hole includes forming a hole elongated transversely to the central axis of the spinal column.

34. The method of claim 30, wherein positioning the blocking member in the defect includes positioning the blocking member in the defect in a location recessed from an outer surface of the annulus.

35. The method of claim 30, wherein forming the recess includes placing a distal portion of a guide member in the defect in contact with an endplate of the vertebra and guiding a cutting instrument with the guide member to form the recess from the endplate into the vertebra along the central axis of the spinal column.

36. The method of claim 35, wherein forming the recess includes placing the distal portion of the guide member in the defect in contact with an endplate of a second vertebra on the other side of the spinal disc and guiding the cutting instrument with the guide

member to form a second recess from the endplate of the second vertebra along the central axis of the spinal column.

37. The method of claim 36, further comprising:

guiding a drilling instrument with the guide member to form a hole in the vertebra spaced from the endplate of the vertebra, the hole being in communication with the recess at an end thereof; and

guiding the drilling instrument with the guide member to form a second hole in the second vertebra spaced from the endplate of the second vertebra, the second hole being in communication with the second recess at an end thereof.

38. The method of claim 30, further comprising forming a hole in the vertebra in communication with the recess.

39. The method of claim 38, wherein the hole is formed at an end of the recess remote from the defect.

40. The method of claim 38, further comprising:

positioning an attachment portion of the blocking member in the hole; and

positioning an anchor through the attachment portion and into the hole to engage the blocking member to the vertebra.

41. The method of claim 40, wherein the blocking member, attachment portion and anchor are recessed below an outer surface of the vertebra.

42. The method of claim 30, further comprising:

forming a second recess in communication with the defect in a second vertebra on the other side of the spinal disc;

positioning the blocking member into the second recess; and

engaging the blocking member to the second vertebra.

43. The method of claim 42, further comprising:

forming a first hole in the vertebra in communication with the defect through the recess;

forming a second hole in the second vertebra in communication with the defect through the second recess;

engaging the blocking member to the vertebra with a first anchor extending through the blocking member and into the first hole; and

engaging the blocking member to the second vertebra with a second anchor extending through the blocking member and into the second hole.

44. The method of claim 43, further comprising:

positioning a first attachment portion of the blocking member in the first hole;

positioning the first anchor through the first attachment portion and into the first hole to engage the blocking member to the vertebra;

positioning a second attachment portion of the blocking member in the second hole;

and

positioning the second anchor through the second attachment portion and into the second hole to engage the blocking member to the second vertebra.

45. The method of claim 44, wherein the blocking member, the first and second attachment portions and the first and second anchors are recessed below an outer surface of the vertebrae.

46. The method of claim 30, wherein the recess opens along an outer surface of the vertebra.

47. A method for repairing an annulus defect in a spinal disc, comprising:
positioning a flexible blocking member in the annulus defect; and
laterally restraining the flexible blocking member with bony tissue of a vertebra on at least one side of the spinal disc.

48. The method of claim 47, further comprising:
forming a recess in the vertebra in communication with the defect; and positioning the blocking member in the recess.

49. The method of claim 48, wherein the recess opens along an outer surface of the vertebra.

50. The method of claim 48, further comprising axially constraining the flexible blocking member with at least one anchor engaged with the vertebra.

51. The method of claim 47, further comprising laterally restraining the flexible blocking member with bony tissue of a second vertebra on the other side of the spinal disc.

52. The method of claim 51, further comprising axially constraining the flexible blocking member with an anchor at each end of the flexible blocking member engaged with the adjacent vertebra.

53. The method of claim 52, further comprising recessing each anchor in a hole formed in an outer surface of each vertebra.

54. The method of claim 53, wherein each hole is in communication with a recess formed in the adjacent vertebra, each recess extending between the adjacent hole and the annulus defect.

55. An instrument for guiding preparation of a bony surface to receive an implant, comprising:

a guide member extending along a longitudinal axis, said guide member including a passage extending therethrough along the longitudinal axis for guiding a first instrument to form a hole in the bony surface, said guide member further including a slot extending along said passage and in communication therewith for guiding a cutting instrument to form a recess in the bony surface.

56. The instrument of claim 55, further comprising a positioning member extending along a side of said guide member, said positioning member including a positioning flange extending distally of said guide member, said positioning flange positionable along a bony structure to facilitate formation of the hole and recess in the bony surface.

57. The instrument of claim 56, wherein said positioning member includes a body extending from said guide member and said positioning flange is spaced from said guide member and extends distally from said body.

58. The instrument of claim 57, wherein said body includes a slot in communication with said slot of said guide member.

59. The instrument of claim 56, wherein said positioning flange is offset from said guide member toward a side thereof including said slot.

60. The instrument of claim 55, wherein said guide member includes a proximal shaft and said passage and said slot extend through said shaft.

61. The instrument of claim 60, further comprising a handle assembly adjustably attached to said shaft.

62. The instrument of claim 55, wherein said passage is circular in a cross-section orthogonal to the longitudinal axis.

63. The instrument of claim 55, wherein said passage is elongated in a cross-section orthogonal to the longitudinal axis.

64. A device for repairing an annulus defect, comprising:

a blocking member extending along a longitudinal axis between a first end and a second end; and

an attachment portion at one of said first and second ends, said attachment portion including an elongated passage extending transversely to the longitudinal axis of said blocking member.

65. The device of claim 64, further comprising a second attachment portion at the other of said first and second ends, said second attachment portion including an elongated passage extending transversely to the longitudinal axis of said blocking member.

66. The device of claim 64, further comprising an anchor positionable through said passage to secure said blocking member to tissue.

67. The device of claim 66, wherein said anchor includes a body having a length extending between a proximal end and a distal end, said body including a width between said proximal and distal ends sized for form-fitting receipt in said elongated passage.

68. The device of claim 67, wherein said body of said anchor includes first and second surfaces along said width, said first and second surfaces including bone engagement features thereon.

69. The device of claim 68, wherein said bone engagement features include a plurality of ridges and valleys along each of said first and second surfaces.

70. A device for repairing an annulus defect, comprising:

a blocking member extending along a longitudinal axis between a first end and a second end, said blocking member including a width transverse to the longitudinal axis; and at least one anchor positionable through said blocking member to engage said blocking member to tissue adjacent the annulus defect, said at least one anchor comprising a body including a width, wherein in an engagement orientation with said blocking member said width of said blocking member is at least twice as great as said width of said blocking member.

71. The device of claims 70, wherein said blocking member includes an attachment portion at one of said first and second ends, said attachment portion including an elongated passage extending transversely to the longitudinal axis of said blocking member, said anchor being positionable through said passage to engage said blocking member to adjacent tissue.

72. The device of claim 70, wherein said body of said anchor includes first and second surfaces along said width, said first and second surfaces including bone engagement features thereon.